

changes in practice for making amendments, and therefore this Substitute Amendment is being submitted to make the amendments in accordance with current practice and recent rule changes.

Please amend the above-identified patent application as follows:

In the Specification:

On page ~~7~~, please substitute the following paragraph for the paragraph at lines 15-25:

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The valve matrix 16 is also connected through a plurality of injection/aspiration lines 22 to a flow-injection unit 24 for introducing or combining at least one reagent-mixture component into a stream of at least one other reagent-mixture component in order to immediately thoroughly and uniformly mix the components and create a reagent mixture, as is described in detail below. The flow-injection unit 24 is coupled through a reagent-mixture injection line 26 to a sensing unit 28 for detecting differences in electrical, optical, chemical or other characteristics of particles in the reagent mixture, and generating signals having characteristics relating to the differences.

On page ~~8~~, please substitute the following paragraph for the paragraph at lines ~~7-17~~:

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As also shown in FIG. 1, a processing and control unit 34 is coupled to each of the pump units 12, the valve matrix 16 and sensing unit 28 to control operation of each component, analyze the data, and provide analysis results. The sensing unit 28 is preferably of the type disclosed in U.S. Patent No. 5,380,491, entitled "Apparatus For Pumping And Directing Fluids For Hematology Testing", and U.S. application serial no. 08/370,023, filed January 9, 1995, now U.S. Patent No. 5,728,351, which is a divisional of U.S. Patent No. 5,380,491, both of which are assigned to the Assignee of the present invention, and are hereby expressly incorporated by reference as part of the present disclosure.

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On page ~~9~~, please substitute the following paragraph for the paragraph at lines ~~7-18~~:

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In hematologic analysis, the sensing unit 28 includes a transducer for counting the white blood cells and measuring their volume (size) and/or opacity by electrical or optical differences. The blood cells are counted for a period of time to gather sufficient data for analysis, and the data is stored and analyzed in the processing and control unit 34 to determine the parameters of the constituent subpopulations of the reagent-mixture sample. The processing and control unit 34 is preferably constructed and operates in accordance with the apparatus and method disclosed in U.S. Patent Nos. 5,187,673 and 5,349,538, both of which are hereby expressly incorporated by reference as part of the present disclosure.

On page 11, please substitute the following paragraph for the paragraph at lines 12-20:

94

In order to minimize fluid waste and in turn further minimize the volume of reagent-mixture components necessary for analysis, the valves employed in the valve matrix 16 preferably exhibit zero dead volume. A preferred type of zero dead volume valve is disclosed in co-pending patent application serial no. 08/385,145, filed February 7, 1995, now U.S. Patent No. 5,542,452, entitled "Valve Assembly", which is assigned to the Assignee of the present invention, and is hereby expressly incorporated by reference as part of the present disclosure.

On page 14, please substitute the following paragraph for the paragraph at lines 3-12:

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Exemplary reagent-mixture components and the preferred methods for employing these components are disclosed in U.S. Patent No. 5,262,329, entitled "METHOD FOR IMPROVED MULTIPLE SPECIES BLOOD ANALYSIS", dated November 16, 1993, U.S. Patent No. 5,316,725, entitled "REAGENT SYSTEM FOR THE IMPROVED DETERMINATION OF WHITE BLOOD CELL SUBPOPULATIONS", dated May 31, 1994, and U.S. Patent No. 5,316,951, entitled "METHOD FOR THE IMPROVED DETERMINATION OF WHITE BLOOD CELL SUBPOPULATIONS", dated May 31, 1994, which are each hereby expressly incorporated by reference as part of the present disclosure.